

**REMARKS**

Reconsideration of the application is respectfully requested.

Upon entry of the foregoing amendment, claims 1-25 are pending in the application. These changes are believed to introduce no new matter, and their entry is respectfully requested. Based on the above amendment and the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

**Summary of claim Rejections**

- I. Claim 11 was objected to because of the formality “he” should be --the--.
- II. Claim 4 was rejected based on 35 U.S.C. 112 as the Examiner states there is insufficient antecedent basis for the limitation “the Internet”.
- III. Claims 1, 2, 6- 19, 21, 22 and 25 were rejected under 35 U.S.C. 103(a) as being unpatentable over Vercellotti et al. (US 5,317,309) in view of Fullerton et al. (US 5,677,927).

**Summary of Amendment**

Applicants have amended claims 1, 6 and 19 to add the language “position determination” between “ultra wideband impulse radio” and “techniques”. Support for the proposed amendments can be found at p.19, lines 17, which states:

See, for example, commonly owned, co-pending applications 09/045,929, filed March 23, 1998, titled "Ultrawide-Band Position Determination System and Method", and 09/083,993, filed May 26, 1998, titled "System and Method for Distance Measurement by Inphase and Quadrature Signals in a Radio System", both of which are incorporated herein by reference.

Applicants have amended claim 4 to include “ a wide area network such as “ prior to “the Internet”.

Applicants have amended claim 11 at line 2 to change “he” to “the”.

**Remarks regarding I**

Applicant submits the informality is traversed with the claim modification of claim 11.

**Remarks regarding II**

Applicant has amended claim 4 to provide the indefinite article “a” and “wide area network” prior to the “the Internet”. As the Internet is a subset of a wide area network and a wide area network is an inherent super set of the Internet, support for this amendment can be found on page 25, line 23, which states:

“In addition to the mailed questionnaire, information can be input over the Internet and correlated to an entrant TAG for pickup at the predetermined area or again mailed to the future entrant.”

Applicant thus submits this rejection is traversed with this amendment of claim 4.

**Remarks regarding III**

Applicants have amended claims 1, 6 and 19 to add the language “position determination” between “ultra wideband impulse radio” and “techniques”. The Examiner stated that it would be obvious to combine Vercellotti *et al.* and Fullerton *et al.* to anticipate the present invention. Vercellotti provides in the ‘309 patent a dual mode electronic identification system using a tag which has an RF receiver and transmitter contained therein.

In Vercellotti, in the first mode, the tag responds to an interrogation signal by transmitting identification data to the interrogator. In the second mode the tag periodically transmits an identification beacon signal to a directional sensing antenna which uses the signal to compute the position of the tag. The power supply for the tag operates from an internal battery or from power received from a portal signal via a tag receiving antenna.

Fullerton provides in the ‘927 patent, an impulse radio communications system using one or more subcarriers to communicate information from an impulse radio transmitter to an impulse radio receiver. The impulse radio communication system is an ultrawide-band time

domain system. Further, the '927 patent provides that direct digital modulation of data is another form of subcarrier modulation for impulse radio signals. Direct digital modulation can be used alone to time modulate the periodic timing signal or the direct digitally modulated the periodic timing signal can be further modulated with one or more modulated subcarrier signals. Linearization of a time modulator permits the impulse radio transmitter and receiver to generate time delays having the necessary accuracy for impulse radio communications.

The Applicant respectfully submits that with the modification of the claims, the Examiner can no longer satisfy the basic requirements of a *prima facie* case of obviousness by using Vercellotti et al and Fullerton et al. to reject the aforementioned claims. For the Examiner to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the references. Second, there must be some reasonable expectation of success. Finally, the references when combined must teach or suggest all of the claimed limitations. Manual of Patent Examining Procedure, Section 2143. For the reasons articulated below, the Applicant believes that in the present case, the Examiner has not met this burden.

The claims have been modified to include the requirement that the position of the TAG be determined by impulse radio position determination techniques. Thus, it would not be possible to simply replace the radios in the dual mode electronic identification system of Vercellotti et al. with the impulse radios of Fullerton to achieve the claimed invention. As noted above, Vercellott requires the use of directional antennas to determine the position of the TAG. Indeed, even if Vercellotti replaced his radios with the Ultra Wide Band radios of Fullerton, the position determination would be done using directional antennas and not the impulse radio position determination techniques disclosed and claimed in the present application.

Again, as discussed above, Fullerton discloses ultra wideband radios, but not the impulse radio position determination techniques of the present invention; and Vercellotti

discusses position determination, but not by using impulse radio position determination techniques. Thus, determining the position of the TAG using impulse radio position determination techniques is neither disclosed, taught, nor suggested in either Fullerton or Vercellotti.

The Applicant respectfully submits the rejection set forth in III, has been traversed.

### **Conclusion**

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot.

Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reasons, that personal communication will expedite prosecution of this application the Examiner is invited to telephone the undersigned at the number provided.

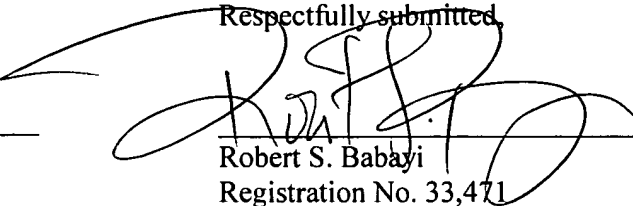
Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

If the Examiner believes, for any reasons, that further communication will expedite prosecution of this application the Examiner is invited to telephone the undersigned at the number provided.

Applicant believes there are no additional fees associated with this reply other than those indicated. However, if this is incorrect, the Commissioner is authorized to charge any fees which may be required for this paper to Deposit Account No. 22-0261

Applicants: Taylor *et al.*  
Application No. 09/511,991

Accordingly, in view of the above amendments, it is believed that the remaining claims of the present invention are in condition for allowance.

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